

SCORECARD A**SOIL INTERPRETATION**

TEAM NAME: _____

STUDENT NAME: _____

SCORE: _____

POINTS: 100

- _____ 1. Surface Texture
- A. Loam C. Silt loam
B. Sandy loam D. Clay loam

- _____ 2. Content of rock fragments in surface layer
(The A Horizon)
- A. 0 to 5% B. 5 to 20%

- _____ 3. Slope (between 50' stakes in field)
- A. 3 to 8%, gently sloping
B. 8 to 15%, moderately sloping
C. 15 to 25%, strongly sloping
D. 25 to 35 %, steep
E. 35 to 70%, very steep

- _____ 4. Depth of soil
- A. 0 to 10 inches, very shallow
B. 10 to 20 inches, shallow
C. 20 to 40 inches, moderately deep
D. 40 to 60 inches, deep
E. greater than 60 inches, very deep

- _____ 5. Drainage class
- A. Very poorly drained
B. Poorly drained
C. Somewhat poorly drained
D. Moderately well drained
E. Well drained

- _____ 6. Depth of surface layer (The A Horizon)
- A. 5 inches C. 9 inches
B. 1 inch D. 10 inches

- _____ 7. Land capability class
- A. Class 1 E. Class 5
B. Class 2 F. Class 6
C. Class 3 G. Class 7
D. Class 4

- _____ 8. Land Capability Subclass
- A. e = erosion
B. s = stoniness
C. w = wetness and/or flooding

- _____ 9. Flood Hazard
- A. None C. Occasional
B. Frequent D. Rare

- _____ 10 AWC Class (calculate to 40 inch depth)
- A. Very low (0 - 2.5 inches)
B. Low (2.5 - 3.2 inches)
C. Moderate (3.2 to 5.2 inches)
D. High (>5.2 inches)

FORAGE ADAPTATION

	<u>FORAGE</u>	<u>Adapted</u>	<u>Not Adapted</u>
1.	Timothy	_____	_____
2.	Orchardgrass	_____	_____
3.	Tall Fescue	_____	_____
4.	Red Clover	_____	_____
5.	Annual Lespedeza	_____	_____
6.	White Clover	_____	_____
7.	Reed Canarygrass	_____	_____
8.	Birdsfoot Trefoil	_____	_____
9.	Bromegrass	_____	_____
10.	Alfalfa	_____	_____

TEAM NAME: _____ STUDENT NAME: _____ SCORE: _____ POINTS: 100

- C 1. Surface Texture
- A. Loam
 - B. Sandy loam
 - C. Silt loam
 - D. Clay loam

- A 2. Content of rock fragments in surface layer (The A Horizon)
- A. 0 to 5%
 - B. 5 to 20%

- D 3. Slope (between 50' stakes in field)
- A. 3 to 8%, gently sloping
 - B. 8 to 15%, moderately sloping
 - C. 15 to 25%, strongly sloping
 - D. 25 to 35 %, steep
 - E. 35 to 70%, very steep

- C 4. Depth of soil
- A. 0 to 10 inches, very shallow
 - B. 10 to 20 inches, shallow
 - C. 20 to 40 inches, moderately deep
 - D. 40 to 60 inches, deep
 - E. greater than 60 inches, very deep

- E 5. Drainage class
- A. Very poorly drained
 - B. Poorly drained
 - C. Somewhat poorly drained
 - D. Moderately well drained
 - E. Well drained

- B 6. Depth of surface layer (The A Horizon)
- A. 5 inches
 - B. 1 inch
 - C. 9 inches
 - D. 10 inches

- F 7. Land capability class
- A. Class 1
 - B. Class 2
 - C. Class 3
 - D. Class 4
 - E. Class 5
 - F. Class 6
 - G. Class 7

- A 8. Land Capability Subclass
- A. e = erosion
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 - C. w = wetness and/or flooding

- A 9. Flood Hazard
- A. None
 - B. Frequent
 - C. Occasional
 - D. Rare

- C 10 AWC Class (calculate to 40 inch depth)
- A. Very low (0 - 2.5 inches)
 - B. Low (2.5 - 3.2 inches)
 - C. Moderate (3.2 to 5.2 inches)
 - D. High (>5.2 inches)

$$\begin{aligned} (.12 + .18) \div 2 &= .15 \times 3" = .45 \\ (.12 + .16) \div 2 &= .14 \times 21" = 2.94 \\ (.08 + .12) \div 2 + .1 \times 7" &= .70 \end{aligned}$$

4.09" available water

FORAGE ADAPTATION

FORAGE	Adapted	Not Adapted
1. Timothy	✓	
2. Orchardgrass	✓	
3. Tall Fescue	✓	
4. Red Clover	✓	
5. Annual Lespedeza	✓	
6. White Clover	✓	
7. Reed Canarygrass	✓	
8. Birdsfoot Trefoil	✓	
9. Bromegrass	✓	
10. Alfalfa	✓	

GRASSLAND CONDITIONS

TEAM NAME: _____

STUDENT NAME: _____

SCORE: _____

POINTS: 100

APPRAISAL OF EXISTING CONDITIONS

(5 points each)

- _____ 1. What is the pasture type by percent dry matter?
- A. Fescue (>90% fescue)
 - B. Cool-season grasses (<10% legumes)
 - C. Cool-season grasses (10-25% legumes or other grasses)
 - D. Cool-season grasses (26-60% legume)
 - E. Legumes dominant (>75% legume)
 - F. Warm-season grasses (<40% other species)
- _____ 2. What is the average growth stage of the dominant forage species?
- A. Vegetative
 - B. Boot or bud
 - C. Heading or bloom
 - D. Mature
 - E. Dormant
- _____ 3. What best describes the condition of the pasture sward?
- A. Spot grazed
 - B. Evenly grazed
- _____ 4. Is weed or brush control needed other than by grazing or soil fertility management?
- A. Yes
 - B. No
- _____ 5. What soil pH range is recommended for this sward?
- A. 4.0 - 4.5
 - B. 4.6 - 5.0
 - C. 5.1 - 5.5
 - D. 5.6 - 6.5
 - E. 6.6 - 7.0
 - F. 7.1 - 7.5
- _____ 6. What fertilizer option is recommended for this pasture?
- _____ 7. What limestone rate is recommended for this pasture in tons per acre?

MATCHING LIVESTOCK AND FORAGE

(5 points for each answer space)

- _____ 1. When does this livestock herd have the highest forage quality requirement?
- A. Spring
 - B. Summer
 - C. Fall
 - D. Winter
 - E. Requirement high year round
- _____ 2. Does this pasture's growth cycle match the seasonal peak nutritional needs of this livestock herd under present management?
- A. Yes
 - B. No
- _____ 3. How many pounds of forage dry matter does this herd need to consume per day in:
- _____ lbs. in spring (5 pts.) _____ lbs. in summer (5 pts.)
- _____ lbs. in fall (5 pts.) _____ lbs. in winter (5 pts.)
- _____ 4. Is forage availability adequate for this herd in:
- Spring - 100 days (5 pts.)
- _____ Adequate _____ Not adequate
- Summer - 100 days (5 pts.)
- _____ Adequate _____ Not adequate
- Fall - 100 days (5 pts.)
- _____ Adequate _____ Not adequate
- Winter - 65 days (5 pts.)
- _____ Adequate _____ Not adequate

COMPLETE QUESTIONS ON PAGE 2

PASTURE IMPROVEMENT

- _____ 1. What change should be made in livestock management?
- A. Continue present management
 - B. Reduce livestock numbers
 - C. Change calving season to a different time of year
 - D. Shorten calving season to a period of < 90 days
 - E. Provide higher quality pasture for heifers and steers
 - F. Switch to a management-intensive rotational grazing system
- _____ 2. What type of additional forage is needed to improve this forage program?
- A. Cool-season grass
 - B. Warm-season grass
 - C. Legumes
 - D. No additional forages needed - use existing pasture
- _____ 3. How should this forage be planted?
- A. Plant on clean, firm seedbed
 - B. No-till plant in killed sod
 - C. Overseed or interseed in a closely grazed sod
 - D. No additional forages needed - use existing pasture
4. What fertilizer option is recommended for this forage?
5. What limestone rate is recommended for this forage in tons per acre?

PLANT IDENTIFICATION LIST

TEAM NAME: _____ STUDENT NAME: _____ SCORE: _____ POINTS: 100

(Write the number of the plant in the space before its name **AND** under its proper life cycle designation; **NOTE:** Ann = Annual, Bie/Per = Biennial or Perennial)

(Ann) (Bie/Per) **GRASS AND GRASSLIKE******

_____	_____	Barnyard Grass
_____	_____	Bermuda Grass
_____	_____	Bluegrass (Kentucky)
_____	_____	Bluestem, big
_____	_____	Bluestem, Caucasian
_____	_____	Bluestem, little
_____	_____	Bromegrass
_____	_____	Broomsedge
_____	_____	Crabgrass
_____	_____	Downy Chess (downy brome, cheat grass)
_____	_____	Fescue (tall)
_____	_____	Foxtail (giant, green & yellow)
_____	_____	Indiangrass
_____	_____	Johnsongrass
_____	_____	Orchardgrass
_____	_____	Purple Top
_____	_____	Reed Canary Grass
_____	_____	Quackgrass
_____	_____	Sedges
_____	_____	Switchgrass
_____	_____	Timothy

******LEGUMES******

_____	_____	Alfalfa
_____	_____	Birdsfoot Trefoil
_____	_____	Clover, White
_____	_____	Clover, Red
_____	_____	Clover, Sweet
_____	_____	Clover, (little hop)
_____	_____	Lespedeza, Korean
_____	_____	Lespedeza, Sericea
_____	_____	Partridge Pea
_____	_____	Tick Trefoil (beggar tick)
_____	_____	Vetch, Crown

(Ann) (Bie/Per) **FORBS******

_____	_____	Bull Nettle (horse)
_____	_____	Chicory, Common
_____	_____	Cinquefoil
_____	_____	Cocklebur, Common
_____	_____	Croton
_____	_____	Daisy Fleabane
_____	_____	Dandelion
_____	_____	Goldenrod
_____	_____	Ironweed
_____	_____	Lambsquarter
_____	_____	Milkweed, Common
_____	_____	Pigweed
_____	_____	Plantain
_____	_____	Queen Anne's Lace
_____	_____	Ragweed, Common
_____	_____	Red Sorrel
_____	_____	Smartweed
_____	_____	Thistle
_____	_____	Three-seeded Mercury
_____	_____	Velvetleaf
_____	_____	Yarrow, Common
_____	_____	Wild Onion

******WOODY PLANTS******

			(Ann)	(Bie/Per)	
_____	_____	Blackberry	_____	_____	
_____	_____	Black Cherry	_____	_____	
_____	_____	Coralberry (buckbrush)	_____	_____	Autumn Olive
_____	_____	Dewberry	_____	_____	Rose (multiflora or wild)
_____	_____	Elm	_____	_____	Red Cedar (juniper)
_____	_____	Grape	_____	_____	Sumac
_____	_____	Greenbriar	_____	_____	Sassafras
_____	_____	Hawthorn	_____	_____	Walnut
_____	_____	Hickory	_____	_____	Wild Plum
_____	_____	Locust (black or honey)	_____	_____	Willow
_____	_____	Oak, black or white	_____	_____	
_____	_____	Osage Orange (hedge apple, hedge)	_____	_____	
_____	_____	Persimmon	_____	_____	
_____	_____	Poison Ivy	_____	_____	


PLANT IDENTIFICATION LIST

TEAM NAME: _____ STUDENT NAME: _____ SCORE: _____ POINTS: 100

(Write the number of the plant in the space before its name **AND** under its proper life cycle designation; **NOTE:** Ann = Annual, Bie/Per = Biennial or Perennial)

(Ann)	(Bie/Per)	****GRASS AND GRASSLIKE****
x		Barnyard Grass
	x	Bermuda Grass
	x	Bluegrass (Kentucky)
	x	Bluestem, big
	x	Bluestem, Caucasian
	x	Bluestem, little
	x	Bromegrass
	x	Broomsedge
x		Crabgrass
x		Downy Chess (downy brome, cheat grass)
	x	Fescue (tall)
x		Foxtail (giant, green & yellow)
	x	Indiangrass
	x	Johnsongrass
	x	Orchardgrass
	x	Purple Top
	x	Reed Canary Grass
	x	Quackgrass
x	x	Sedges
	x	Switchgrass
	x	Timothy

****LEGUMES****

		Alfalfa
		Birdsfoot Trefoil
		Clover, White
		Clover, Red
		Clover, Sweet
		Clover, (little hop)
		Lespedeza, Korean
		Lespedeza, Sericea
		Partridge Pea
		Tick Trefoil (beggar tick)
		Vetch, Crown

(Ann)	(Bie/Per)	****FORBS****
	x	Bull Nettle (horse)
	x	Chicory, Common
	x	Cinquefoil
x		Cocklebur, Common
x		Croton
x		Daisy Fleabane
	x	Dandelion
	x	Goldenrod
	x	Ironweed
x		Lambsquarter
	x	Milkweed, Common
x		Pigweed
x	x	Plantain
	x	Queen Anne's Lace
x		Ragweed, Common
	x	Red Sorrel
x	x	Smartweed
	x	Thistle
x		Three-seeded Mercury (Virginia Copperleaf)
x		Velvetleaf
	x	Yarrow, Common
	x	Wild Onion

****WOODY PLANTS****

	x	Blackberry			
	x	Black Cherry	(Ann)	(Bie/Per)	
	x	Coralberry (buckbrush)		x	Autumn Olive
	x	Dewberry		x	Rose (multiflora or wild)
	x	Elm		x	Red Cedar (juniper)
	x	Grape		x	Sumac
	x	Greenbriar		x	Sassafras
	x	Hawthorn		x	Walnut
	x	Hickory		x	Wild Plum
	x	Locust (black or honey)		x	Willow
	x	Oak, black or white			
	x	Osage Orange (hedge apple, hedge)			
	x	Persimmon			
	x	Poison Ivy			

WILDLIFE HABITAT

TEAM NAME: _____

STUDENT NAME: _____

SCORE: _____

POINTS: 100

APPRAISAL OF EXISTING CONDITIONS

(5 points each)

- _____ 1. Extent of border:
- A. Border along 0 to 25%
 - B. Border along 26 to 50%
 - C. Border along 51 to 75%
 - D. Border along 76 to 100%
- _____ 2. Percent of field covered by winter or escape cover (include brushy draws, brushpiles, fallen logs, etc.):
- A. No cover present
 - B. Less than 10% of field has winter/escape cover
 - C. Field is less than 10 acres in size
- _____ 3. Percent canopy coverage of shrubs and herbaceous vegetation 6 to 18 inches tall. (Refer to 50 X 50 foot enclosure):
- D. Less than 25% coverage
 - E. 26 to 75% coverage
 - F. More than 76% coverage
- _____ 4. Grazing pressure (Refer to 50 X 50 foot enclosure):
- A. Heavy
 - B. Moderate
 - C. Light
- _____ 5. Percent of ground covered or shaded by both native and introduced legumes. (Refer to 50 X 50 foot enclosure)
- G. 5 % or less of the ground covered by legumes
 - H. 6 to 50% of the ground covered by legumes
 - I. 51% or more of the ground covered by legumes
- _____ 6. Plant composition by % cover (Refer to 50 X 50 foot enclosure):
- A. Tall fescue (90% or more)
 - B. Mixed cool-season grass (<10% legumes)
 - C. Cool-season grass dominant (10 to 25% legumes or other grasses)
 - D. Cool-season grass & legumes (26 to 60% legumes)
 - E. Legumes dominant (>75% legumes)
 - F. Warm-season grasses dominant (<40% other species)
- _____ 7. Distance from center of field to edge of nearest cropfield:
- A. Over 500 feet to cropfield
 - B. 250 to 499 feet to chiseled or disked cropfield
 - C. Less than 249 feet to chiseled or disked cropfield
 - D. 250 to 500 feet to cropfield with no fall tillage or with crop of winter wheat
 - E. Less than 249 feet to cropfield with no fall tillage or with crop of winter wheat
- _____ 8. Field size - the % of field with 250 feet of dense woody cover or ungrazed woodland.
- A. Less than 25%
 - B. 25 to 50%
 - C. 51 to 75%
 - D. 76 to 100%
-
- This completes the evaluation portion - be sure each question is answered. Now complete the following questions by placing the proper letter in the blank preceding each question.
-
- MULTIPLE CHOICE QUESTIONS
(3 points each)
- _____ 1. The maximum density or the upper limit of survival possible of a species that a particular range or area is capable of supporting during a definite period of the year is referred to as:
- A. Diversity
 - B. Habitat
 - C. Carrying Capacity
- _____ 2. The place where the animal lives; where all its requirements for life are fulfilled is referred to as its:
- A. Diversity
 - B. Habitat
 - C. Carrying Capacity

COMPLETE QUESTIONS ON PAGE 2

- _____ 3. Which plant types are dominant species in a grassland?
A. All plants species C. Grasses, shrubs, and legumes
B. Forbs and grasses D. Woody plants, grasses, forbs, and legumes
- _____ 4. Herbaceous, broadleaf plants with seeds in a single row within the seed pod.
A. Grass D. Sedge
B. Legume E. Annual
C. Forb
- _____ 5. A low growing, woody plant with several permanent stems arising from a common base.
A. Shrub C. Forb
B. Grass D. Herb
- _____ 6. A plant that is capable of removing nitrogen from the air and adding it to the soil by way of its root system is called a:
A. Rush C. Legume
B. Grass D. Sedge
- _____ 7. Usually the most productive grazing practice for both livestock and wildlife is:
A. Heavy C. Rotation
B. Light D. Moderate
- _____ 8. Cool-Season grasses grow best during this time of year:
A. Summer/Fall C. Spring/Summer
B. Spring/Fall D. Summer
- _____ 9. Wildlife prefer grasses which:
A. Grow in very dense stands close to the ground
B. Grow in less dense stands with upright leaves
C. Have berries
- _____ 10. Warm-season grasses should not be grazed closer to the ground than:
A. 8 inches C. 20 inches
B. 2 inches
- _____ 11. In a pasture rotation system, warm-season grasses are used to supplement cool-season grasses during the:
A. Winter C. Summer
B. Spring D. Fall
- _____ 12. The peak quality of warm-season grasses is just after the peak of wildlife hatching in:
A. July D. April
B. September E. November
C. May
- _____ 13. This plant is not a grass:
A. Sand bur C. Green Foxtail
B. Downy chess D. Birdsfoot Trefoil
- _____ 14. A species (animal or plant) that is a part of the original fauna is:
A. Exotic Species C. Native Species
B. Organism D. Predator
- _____ 15. The land area that drains toward a natural surface water system:
A. Water course C. Diversion terrace
B. Watershed
- _____ 16. Heavy grazing or excessive haying could cause undesirable plants to:
A. Increase C. Completely die out
B. Decrease
- _____ 17. Cool-season grasses do not use soil nutrients as effeciently as native warm-season grasses and require somewhat higher fertility and soil pH.
A. True B. False
- _____ 18. Proper management of a grassland may include:
A. Grazing D. Over-seeding
B. Haying E. Prescribed Fire
C. Fertilizing F. All of these
- _____ 19. This plant is not a legume:
A. Vetch C. Black-medic
B. Soybean D. Foxtail
- _____ 20. A plant that completes its life cycle in two years.
A. Perennial C. Biennial
B. Annual D. Seasonal